

C&DH 2A 1553 Bus Failure

CAUTION ALARM

Caution ①

UB Orb N1-1 Bus
Failure

Advisory ②

UB EPS N1-14 Bus
Failure

UB EPS N1-23 Bus
Failure

CB GNC N1-1 Bus
Failure

CB GNC N1-2 Bus
Failure

LB Sys Lab-1 Bus
Failure

LB Sys Lab-2 Bus
Failure

Nominal Config:

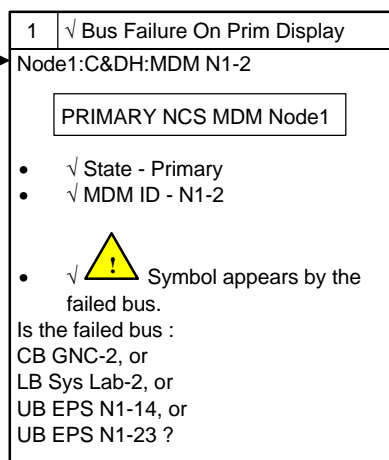
Comm. Via Early
COMM or OIU

N1-2 State = Prim
N1-1 State = Second

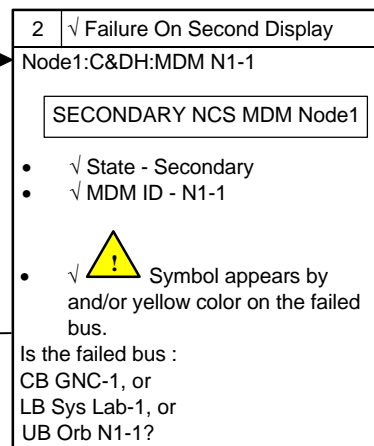
Active Tlm Sink =
FGB

Auto Retry = Ena

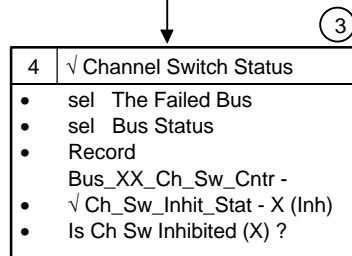
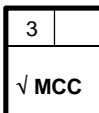
Bus FDIR = Ena



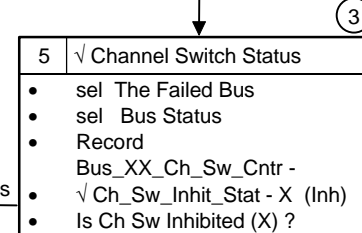
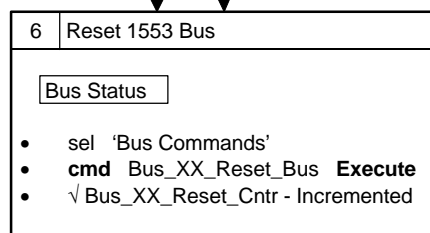
No



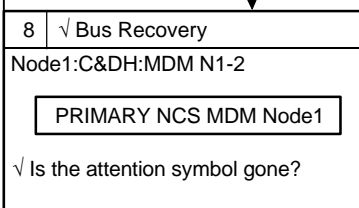
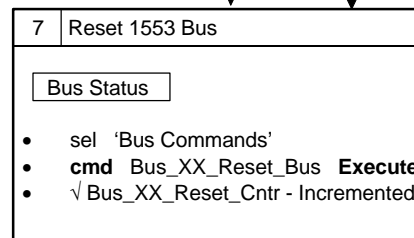
No



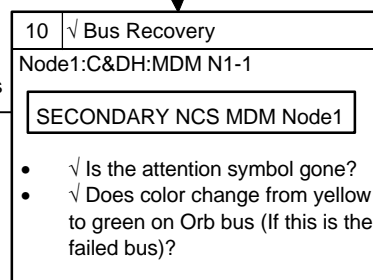
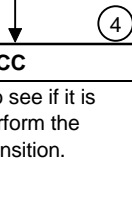
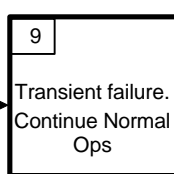
Yes



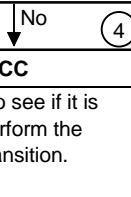
Yes



Yes



Yes



①

UB Orb_N1-1 is the only bus that generates this caution message. However, this bus only has a few RTs on it: OIU 1 & 2 (not always present), 4 CBMs (usually off), and FGB 1 & 2 (only one is active on the Primary MDM). So, most of the time, there is no I/O on the bus; Hence, there is no caution message generated (no bus failure). In addition, there are cases with only one RT on the bus. In these cases, the failure of the RT itself will also cause the bus to fail. Only the caution and warning messages generate the yellow color on the failed bus.

②

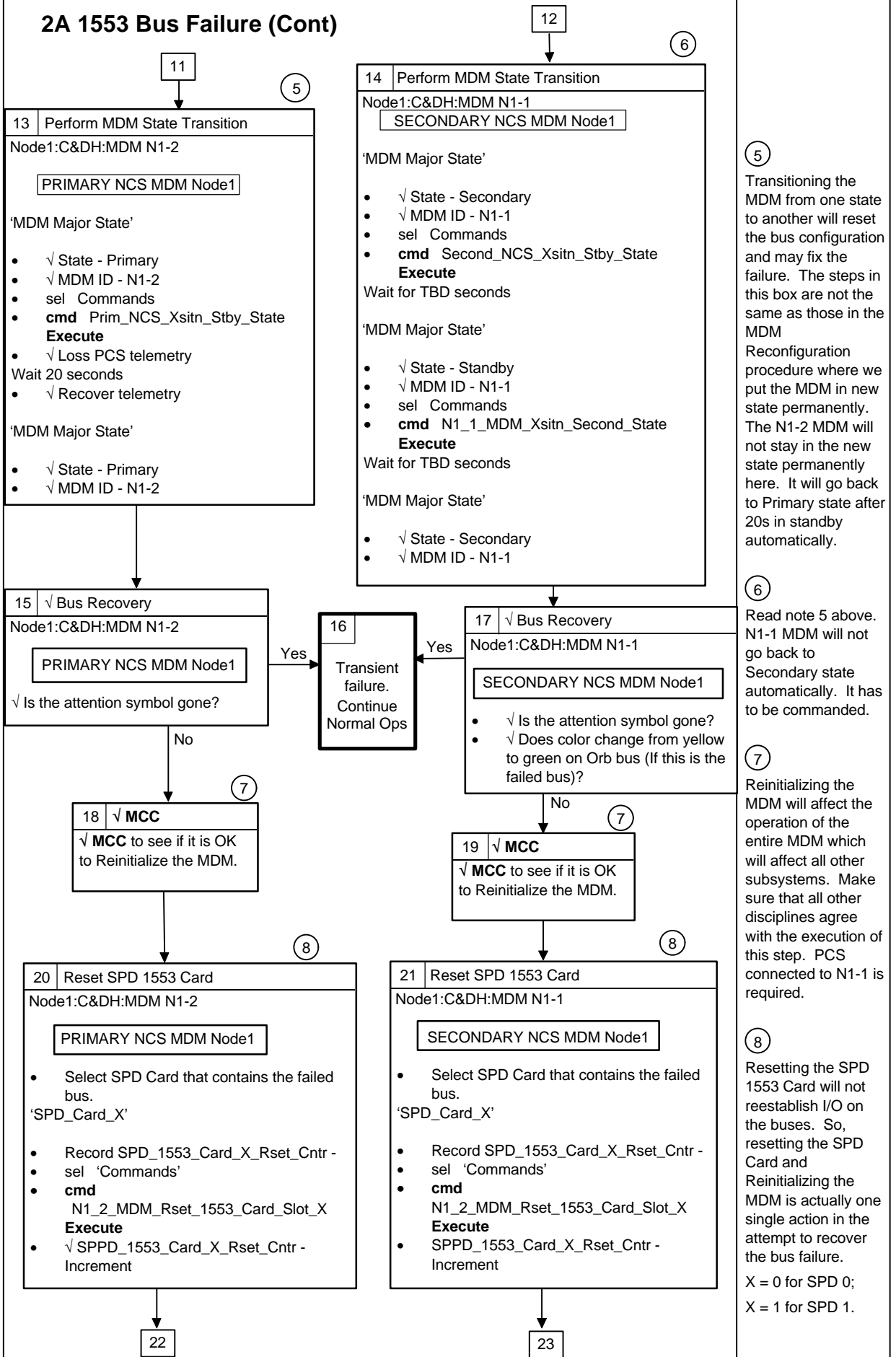
GNC-2 bus has only 2 RTs on it: N1-1 MDM and a CBM (usually off). GNC-1 only has one CBM (usually off). Read note 1 above.

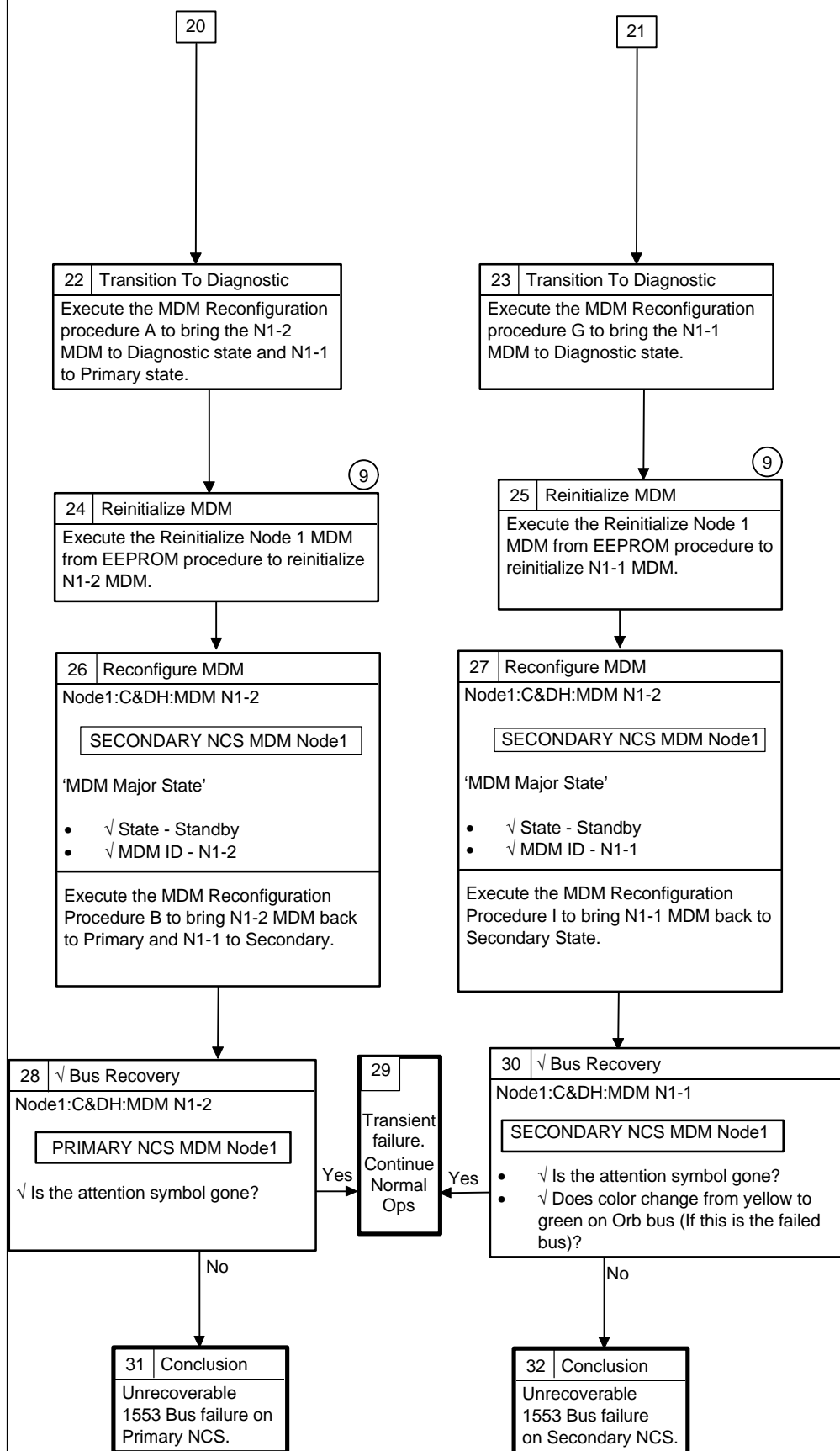
③

"Bus_XX_" is the Ops name of the actual failed bus (e.g. CB GNC_2). The "Bus_XX_", nevertheless, has to be one of the buses in the box right above this box (1 or 2).

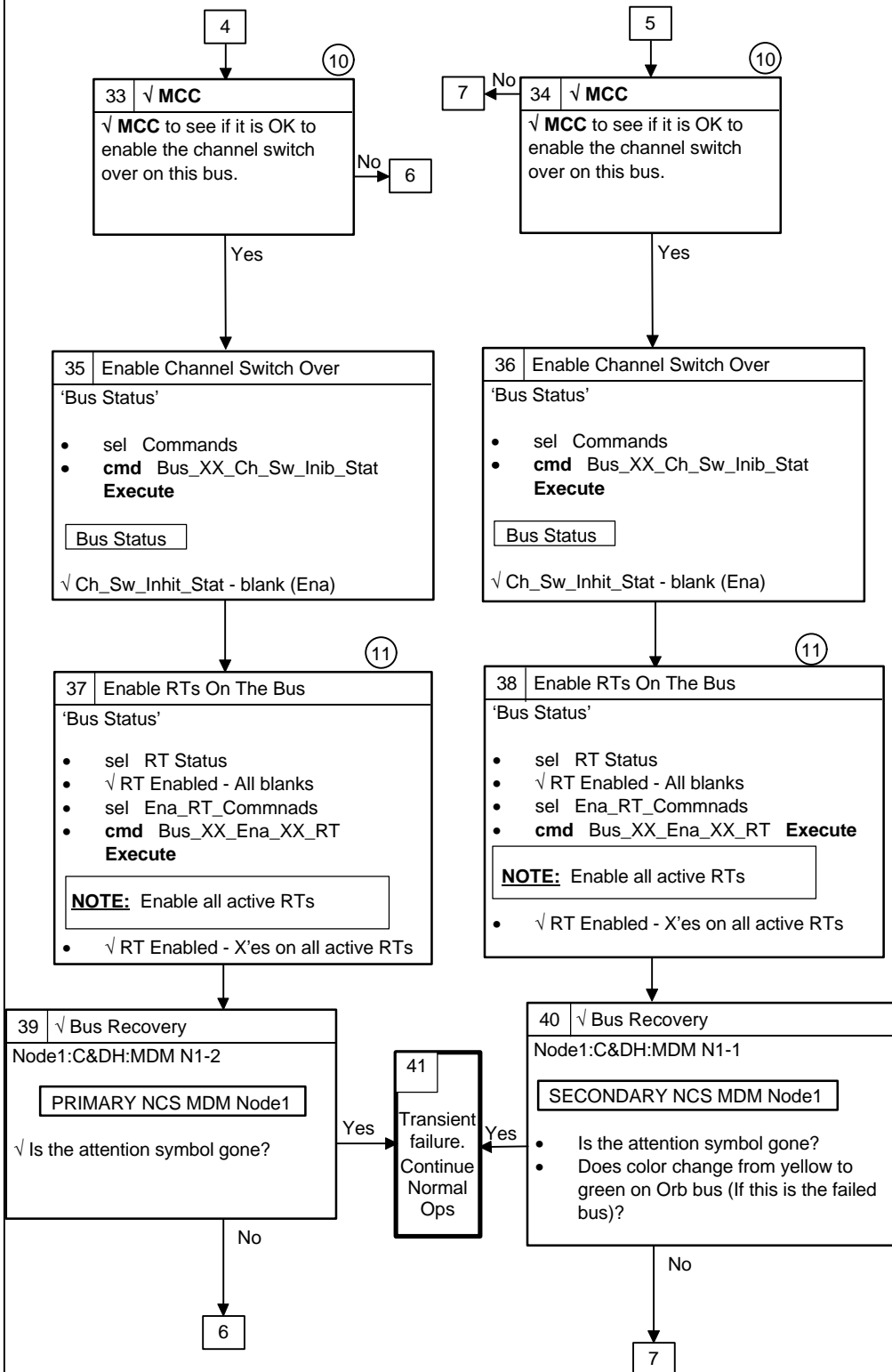
④

MDM state transition will affect all other space station subsystems connected to that MDM. Make sure that all other disciplines agree with the execution of this step.





⑨
Reinitializing the MDM from EEPROM will clear the station old configuration



⑩ The Auto switch over must have been inhibited for a reason. It is necessary to make sure that there are no critical functions being performed on the other channel that may be hazardous if enabled.

⑪ Before the bus is declared fail, every single RT on the bus has to fail. The RTs on the failed bus are disabled prior to setting the bus failure flag bit. The RTs will have to be re-enabled to be able to see if the bus works on the other channel. Use the RT # to RT Ops names Matrix to enable the active RTs on this bus.